CLAIMS:

1. A method for producing nanoscale hollow inorganic fibrils or nanotubes, including moving a carbon-containing substrate within a reaction chamber either through an electric arc in a gap between two electrodes or adjacent an electrode so that an electric arc exists between the electrode and the substrate, to cause the nanotubes to form on the substrate.

2. A method according to claim 1 including moving the substrate at a substantially steady speed through the arc.

3. A method according to claim 1 including moving the substrate through the arc in steps.

4. A method according to anyone of claims 1 to 3 wherein at least one electrode is a carbon containing electrode.

5. A method according to claim 4 wherein the substrate is composed of carbon fibres.

6. A method according to claim 5 wherein the substrate is a tape or belt woven from carbon fibres.

7. A method according to claim 5 wherein the substrate is a paper of carbon fibres.

8. A method according to any one of claims 1 to 7 including tensioning the substrate against the anode of the electrodes.

9. A method according to any one of claims 1 to 8 including moving the substrate at a speed such that the substrate has a residence time in the arc of at least three seconds.

10. A method according to any one of claims 1 to 9 including moving the substrate at a speed of less than 5mm per second.

11. A method according to any one of claims 1 to 10 wherein the arc current is sufficiently low to form nanotubes on the substrate but avoid structural damage to the substrate.

12. A method according to any one of claims 1 to 10 wherein the arc current is set at a level which causes some vaporisation of the substrate without structurally damaging the substrate.

13. A method according to any one of claims 1 to 12 wherein the arc has a current density in the range 0.1 to 1 Amps/mm^2.

14. A method according to any one of claims 1 to 14 wherein a catalyst is present which will favour the production of single wall nanotubes.

15. A method according to any one of claims 1 to 15 including flushing a gas through the reaction chamber which contains sufficient oxygen to react with other species without oxidising the nanotubes on cool down..

16. A method according to any one of claims 1 to 15 including directing a flow of gas to cool one or both of the electrodes and/or the substrate.

17. A method according to any one of claims 1 and 16 including directing a flow of gas onto the substrate after it has passed through the arc to cool the substrate and/or clear it of carbon vapour.

18. A method according to any one of claims 1 to 17 wherein the nanotubes are carbon nanotubes.

19. A method according to any one of claims 1 to 17 wherein the electrodes and the substrate have a carbon purity in excess of 99.5%.

20. A method according to any one of claims 1 to 17 wherein the nanotubes are composed of BC_2N and/or BC_3.

21. A method of producing nanoscale hollow carbon fibrils or nanotubes, comprising moving a tape or belt composed of carbon filaments having a carbon purity in excess of 99.5% through an electric arc in a gap between two carbon containing electrodes having a carbon purity in excess of 99.5% at a speed sufficient relative to the arc current to form carbon nanotubes on the fibres or filaments of the substrate without damaging the substrate.

22. Carbon nanotubes formed by the method of any one of claims 1 to 21.

23. A method according to any one of claims 1 to 21 wherein a power supply which supplies the arc current has a rms voltage ripple of less than 1 volt and current ripple of less than 0.5 Amps.